

AMENDMENTS TO THE CLAIMS

Docket No.: SEM-0007

Please cancel claims 3, 4, 8 and 9.

Please amend claims as set forth below. A complete listing of all claims with their correct identifier is presented below.

1. (CURRENTLY AMENDED) A switching circuit having a switching element, comprises comprising: a current detecting circuit having a main switch composed of MOSFET, whose having an on-resistance at on-voltage-shows resistance characteristics, wherein a gate terminal thereof is connected to a driving circuit, and further one of a drain terminal and a source terminal thereof is connected to a fixed potential and the other terminal is connected to a load circuit; a first resistance element having higher resistance value than the on-resistance of the main switch, a subsidiary switch composed of MOSFET, the source terminal of which is connected to the first resistance element, an amplifier that amplifies comparatively a first resistance element voltage generated in the first resistance element and the on-voltage of the main switch and generates an outputs output to a subsidiary switch gate terminal of the subsidiary switch; and a second resistance element connected to a drain terminal of the subsidiary switch, in which a second resistance element that voltage is generatesd voltage by according to an amplifying on-current of the main switch; and a third switch, connected between the first resistance element and the subsidiary switch in which a third switch gate terminal of the third switch is connected to the driving circuit so that a gate signal of the third switch is synchronized with that of the main switch by connecting to a drain terminal of the subsidiary switch.

- 2. (CURRENTLY AMENDED) The switching circuit according to Claim 1, wherein one of terminals of the first resistance element is further connected to a-the fixed potential as in the main switch.
 - 3. (CANCELED)

Application No. 10/541,385 Amendment dated Reply to Office Action of September 29, 2006

4. (CANCELED)

- 5. (CURRENTLY AMENDED) The switching circuit according to Claim 1, wherein one of terminals of the first resistance element is connected to a terminal which is connected to a-the load circuit of the main switch, and the other terminal of the first resistance element is connected to the source terminal of the subsidiary switch.
- 6. (ORIGINAL) The switching circuit according to Claim 1, wherein the first resistance element has the same cell structure as the main switch and is MOSFET biased by a fixed gate or poly-silicon resistance.
- 7. (CURRENTLY AMENDED) The switching circuit according to Claim 1, wherein the first resistance element has the same cell structure as the main switch and is MOSFET biased by a fixed gate or poly-silicon resistance, wherein one of terminals of the first resistance element is connected to a-the fixed potential as in the main switch.
 - 8. (CANCELED)
 - 9. (CANCELED)
- 10. (CURRENTLY AMENDED) The switching circuit according to Claim 1, the first resistance element has the same cell structure as the main switch and is MOSFET biased by the a fixed gate or poly-silicon resistance wherein one of terminals of this first resistance element is connected to a terminal which is connected to the load circuit of the main switch and the other terminal of the first resistance element is connected to the source terminal of the subsidiary switch.